

SPIRE OF ST. NICHOLAS'S CHURCH, NEWCASTLE.

TO THE EDITOR OF THE BUILDER.

DEAR SIR,—In accordance with a previous intimation, I forward you a sketch of the admirable, and I may say inimitable, spire of St. Nicholas's Church in this town—I say inimitable, for I have reasons for thinking that it has been attempted to be copied both in London and Edinburgh, in the former instance by Sir Christopher Wren, or his daughter, for the little church of St. Dunstan's, London, which unhappily is an entire failure, as compared with the beautiful structure in question; and the Edinburgh practitioner has been more unsuccessful still. My principal motive in now directing attention to this masterpiece of production of human skill, is an endeavour to throw some light upon the mode in which it has been constructed, by which with all its aerial lightness it has braved "the bottle and the breeze" for several centuries, and yet remains a lasting monument of the fame of the persons, whoever they might be, who designed and constructed it.

It will be observed by the annexed sketch, that the extraordinary effect of this spire is produced by the four arched ribs, which spring from the buttresses at each corner of the tower, and sustain the beautiful perforated lantern, with its attendant miniature buttresses, pinnacles, and crockets.

It is foreign to my present purpose to criticise

the relative proportion which the square tower of this church bears to the beautiful spire of which it is the support—not to condemn the *abominable Italian mass* that has been stuck against the southern flank of this *Gothic church*, nor the internal incongruities in the shape of monuments, modern and ill-executed stained-glass that deform the *tout ensemble* of the interior—No! I trust my object is of a higher order, namely, to endeavour to elucidate the manner of construction of this beautiful spire, which is at once one of the most extraordinary examples of masonic excellence, and one of the most picturesque architectural objects in the world, not excepting the celebrated fane of San Sophia, the Mosque of Saladin at Jerusalem, or the Church of St. Peter's at Rome!

Trusting that the above rapid observations may awaken a spirit of inquiry in the minds of some of your constructive readers, I am, Dear Sir, yours truly,

GEORGE WALSHAM.

P. S.—The writer of the above, being only a temporary inhabitant of these northern climes, will feel extremely obliged by some of your Newcastle readers giving him some authentic information through your pages as to who was the architect, builder, &c., of this church, with the date of its erection.

Newcastle, May 1, 1843.



METEOROLOGICAL SOCIETY.

Tuesday, May 24, 1843.

THE minutes of last meeting having been read and confirmed, Professor Sewell, of the Veterinary College, Camden Town; W. H. Cullen, Esq., M.D., M.R.C.S., of Sidmouth, and J. W. Burrows, Esq., were elected members.

Papers read:—

1st. On solar, stellar, and cometary light, with an attempt to explain the manner these phenomena influence the earth's atmosphere, by Lieut. Morrison, R.N., and remarks on the peculiarity of the weather during the first week in May, 1843, being a supplement to the above paper, being a practical application of its principles by the Secretary.

"Solar light," observes Lieut. Morrison, "or that which we may properly designate *luminosity*, is an essence or body emanating from the sun, according to one school of theorists, and a mere *undulation* of a certain elastic ether, by another." But Lieut. Morrison considers it to be "the excitement of vibrations in the ether, to a certain point, which may properly be denominated the *luminous zero*. The action of solar influences is precisely analogous to the action caused by heat in ter-

restrial bodies. It has been thought that the chemical action of the solar ray was greater according as the vibrations were shorter, and diminished as the length of the vibrations increased, and at length nearly ceased at the *luminous zero*, where the luminous and caloric vibrations begin. The evidence is ample that is caused in any body exposed to the solar influence, exactly in proportion to the darkness of its colour; hence, the less solar rays are reflected or thrown off, the greater heat, the more extended and the more rapid vibrations of the ether in that body.

Lieut. Morrison exhibited some slips of photogenic paper, to shew that that portion of the paper on which the sun's rays impinged at right angles was much more darkened than that on which the ray impinged with an incident angle of less magnitude. "It is a very surprising fact," he observed, "that the writers on solar light seem to have wholly forgotten that there is such a thing in nature as electricity. I would now suggest, that what I have called the '*luminous zero*' or point where light appears, whether by terrestrial or celestial heat, is that where the bodies in question are in a minimum state of induction; and that, when colour appears, induction proceeds rapidly till the red ray is attained;

when chemical action is at its height and ceases to increase, *induction* is at its maximum, and then conduction commences; therefore, luminosity is evidence of the presence of electrical action or disturbance among the molecules of the body; i.e. '*induction*.' Induction is, therefore, electrical disturbance, and conduction the restoration of the equilibrium. The blue ray initiates *induction*, the red ray commences *conduction*. The red ray, as shewn by Mr. Ryan on light, is the same as positive electricity." This paper continued to illustrate the effects of different rays of light upon vegetables, in which it was fully proved that those plants that were exposed to the *red ray only* were unhealthy, where those exposed precisely under the same circumstances to the blue ray only, were vigorous and healthy, shewing that under a clear blue sky plants vegetate freely and are healthy, while those periods when the sky is covered with a red haze, which frequently abounds in the air previous to a thunderstorm, the leaves of trees and plants are found to flag, and hence vegetation proceeds but slowly. After enlarging considerably on the colour of the rays of light, and their chemical action, the paper went into the formation of crystals at certain angles by the action of solar light, from which the author came to this result, "that electric intensity of the atmosphere varies with the amount of its heat, excess of vapour, &c."

After briefly noticing the action of reflected solar light, the power of light reflected from the moon was fully discussed, in which it was shewn that, by the rapid undulations of reflected lunar light, each particle travelling at the rate of 207,900 miles every second, multitudes of electric currents were generated; that the moon's rays acted on calotype paper, and crystallized salts of silver. On treating of the light reflected from the planet Mars, the same line of reasoning was adopted to shew that Mars excites the electricity of the atmosphere, and heralds the most terrific phenomena of lightning and its consequences.

On stellar light, it was observed, that all coloured rays reached the earth in the same space of time, and that the chemical action and electric state of this earth's atmosphere are continually undergoing changes by silent "convective" discharges, through the action of the stellar influences. By

COMETARY LIGHT, the author of this paper considered that the temperature of our atmosphere was raised on its approach, and instanced the following botanical fact, in support of such opinion: "The mast of the beech has appeared this year *with the leaves*, a thing never before known." The paper concluded by shewing that "electric fluid is the most active agent in nature, ever in agitation, affecting animal and vegetable life by chemical combinations, as considered in atmospheric phenomena."

The supplementary remarks by the secretary went merely to remark the highly *positive* conditions of the atmosphere during the stationary position of Mars on the 3rd May, and the complete electric change of that condition on Saturn becoming stationary on the 6th, changes which were amply verified by the meteorological instruments, by the excessive fall of rain, and by the grand display of the *aurora borealis*. The secretary thus made a practical use of Lieut. Morrison's remarks.

ECCLESIASTICAL ARCHITECTURE.—The new churches at Rochampton, Wimbledon, Hanwell, and St. Paul's, Wilton Place, proclaim a new era in church architecture. The last-named edifice it is reported will be consecrated on the 1st of next month, by the Bishop of London. The interior is very striking. The roof, reading-desk and pulpit display some of the most choice specimens of modern carpentry. The chancel is deep and well-proportioned, but want of adequate funds has prevented its completion for the present, which certainly, considering the opulence of the neighbourhood, ought not to be the case. It is but just to add, that many have acted with becoming liberality, and that the Marquis of Westminster has presented 500*l.* towards defraying the expense of the new organ. The most beautiful ornament to the church is the font, a present from the Rev. D. A. Beaumont to the new incumbent, to whom he was curate. The workmanship and taste are exquisite. We also mention with pleasure, that some of the very best seats in the church are provided for the aged poor, close by the eagle desk and pulpit, where they can both hear and see.